Gateway Clean Air Program

Gateway Air Repair

A Newsletter for the Vehicle Repair Industry Volume 8 Number 4 July 2006

Tools for Effective OBDII Diagnosis and Repair

by Chuck Dachroeden, Missouri Department of Natural Resources' Air Pollution Control Program – Inspection / Maintenance Section Chief

Current and future emission testing and repair require 21st Century tools be used by the repair technician. Today's vehicles use on board computers to monitor and control everything from engine fuel trim to ride stability to tire pressure. Determining causes and correcting problems noted by these on board computers is no simple task. Repair technicians involved in emission related repairs need to use all of the available tools to enhance their ability to accurately diagnose the cause of an emission failure.

One important tool is a computerized reference library such as ALLDATA or Mitchell1On-Demand. These information systems provide a technician both a quick way to look up manufacturer-issued technical service bulletins and recalls. It also provides the diagnostic flow charts needed to help the technician determine the actual cause(s) of on-board diagnostic (OBDII) trouble codes. Drive cycle information is also available, and can include the various sensor readings and engine-operating conditions needed to complete a readiness monitor drive cycle.

The diagnostic scan tool is another valuable tool, provided the technician understands how to use all the various mode functions to diagnose OBDII failures. A vehicle's on-board computer primarily uses component voltage readings to determine optimal operating settings for the engine. These readings also assess whether a component is performing within established manufacturer parameters. Technicians should be able to use all nine modes available on most scan tools to determine which component(s) of a system is not performing correctly. Data presented on the scan tool can also indicate where a vehicle may experience future problems, such as setting emission control system readiness monitors.

A tool that should be considered essential is the Internet. Web sites for each vehicle manufacturer offer specific technical information. Technician 'chat rooms' allows repair problems to be discussed with active repair technicians located around the world. Responses from others who have diagnosed and repaired similar problems provide you with insight beyond your experience. There is a section within this Gateway Air Repair (GAR) newsletter that lists many of these resources.

"Shop owners should encourage and support their repair technician's continued education."

The Gateway Clean Air Program promotes repair technician training so you can use all of these tools more efficiently. Shop owners should encourage and support their repair technician's continued education. Changes coming to the emissions inspection program in 2007 will put an even greater responsibility on repair shops to provide cost-effective repairs and quick resolutions to any retest concerns related to unset readiness monitors.

Repair technicians and service managers should seek and take as much hands-on, in-depth training regarding OBDII systems, as well as the resources available to a shop. There are many worthwhile Missouri Recognized Repair Technicians (MRRT) approved courses that can help you. Both to understand emission testing and repair, and to determine what you need to learn more about. These are also listed in this GAR newsletter.

The MRRT status for a technician and a shop will not lessen in importance in the future. A minimum of four hours of continuing education in 2006 is required to maintain MRRT status in 2007. However, limiting training to four hours per year may limit a shop's capabilities to meet its customers needs now and in the future.

Verify Your Repairs!

The Gateway Clean Air Program allows the results of repairs performed to be checked before returning a previously failing vehicle to its owner. A great customer service measure, verifying your repairs allows your shop to inform the owner whether the vehicle passed, qualifies for a waiver, or requires additional work. This also allows Missouri Recognized/Qualified Repair Technicians (MRRT or MQRT) shops to decide if a repair is applied toward the shop's Repair Effectiveness Index (REI) score.

The process is simple:

1 Prior to a retest, complete the Repair Data Section on the back of the Vehicle Test Report, leaving the box "To be completed by the repair technician only:" incomplete.

2 The person presenting the vehicle tells the GCAP inspector they are there for a "Repair Verification Test". The inspector will use the Vehicle Test Report to initiate the retest, then place it back on the dash.

3 After the retest, the GCAP inspector will provide the shop representative the results of the retest.

4 The test results allow the representative to determine how to fill out the "To be completed by the repair technician only:" box on the old Fail Vehicle Test Report on the dash.

a. Pass result – check the yes box and turn it in to the inspector at the end of the test lane.

b. Fail or Reject result – check the no box, sign it and turn it in to the inspector at the end of the test lane. This prevents the repair from being included in a shop's REI.

5 The representative may then return to the shop

a. The Pass Vehicle Test Report can be provided to the vehicle's owner so they may use the report to register the vehicle.

b. A Fail Vehicle Test Report allows the technician and the motorist to discuss options, either to make additional repairs or to apply for a waiver provided all waiver requirements have been met.

c. A Reject Vehicle Test Report allows the technician to review the data on the OBDII test, and let the customer know what needs to be done including additional repairs or additional normal city and highway driving.

Customers seeking a waiver must present the vehicle and paperwork in person. The customer should take the last Fail Vehicle Test Report to the manager's office of any emission test facility. The customer should also take all of their repair invoices and receipts and request a waiver at the front desk.

The Gateway Clean Air Program implemented this service as a benefit for all involved in the emissions repair process. Retests for a test Fail are free in the enhanced area within 30 calendar days of the initial failure or within 20 business days of the initial failure in Franklin County. Retests for a test Reject are free in the enhanced area within 60 days of the Reject test date. Please call 1-888-748-0377 between 8 a.m. and 5 p.m., Monday through Friday with questions.

OBDII Drive Cycle Information Available

Effectively repairing and retesting an OBDII system can be complicated. Clearing all the diagnostic trouble codes also resets the emission control system readiness monitors to Not Ready. These monitors require being reset to Ready before a Pass test can occur, a possibly time consuming process for you or your customer.

The National Center for Vehicle Emission Control Systems (NCVECS) has a CD available that provides NCVECS-developed generic OBDII drive cycles for the majority of vehicles. Successful completion of the drive cycle will allow you to reset the monitor(s) and verify the effectiveness of the repair. Having all the readiness monitors set before you return a vehicle to your customer enhances their ability to acquire a retest and, hopefully, a Pass.

The cost for the Drive Trace CD is $39.95 (plus $4.50 S/h). To order call (970) 491-7240 or visit www.ncvecs.colostate.edu.

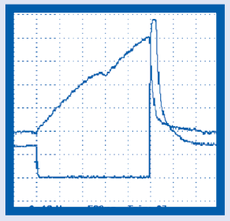
MOTOR Information Systems also has an OBDII Drive Cycle Guide available. For information regarding this product, please call 1-800-426-6867.

Case Study: DTC P0303, P0305 in Jeep Liberty

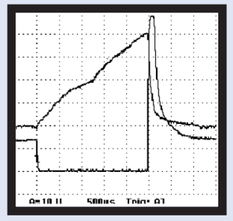
Vehicle	2002 Jeep Liberty Limited Engine: 3.7 L COP, SFI
Mileage	51,533
MIL Status	ON
DTC	P0303 & P0305
Symptoms	Misfire, MIL Lamp on intermittent, slight shudder & misfire at highway speeds.
Repairs Done	Plugs Replaced, Ignition Coils Swapped, Injectors cleaned and the problem was still present.

Fix: We repaired this vehicle by replacing the fuel injectors on cylinders 3 & 5. More important is how we diagnosed this misfire problem. First, we started with a scan of the system, followed by gas analysis, and then primary ignition checks. We found that the scan tool displayed two DTCs, the gas analysis reading showed low CO2 in addition to a Lambda over 1 (indicating a lean condition). In addition, the ignition scope reading confirmed the gas analysis with high KV only on cylinders 3 and 5. We added propane to the engine while observing the ignition KV readings. When the reading proceeded downward, it confirmed a fuel delivery problem. We then knew it was time to hook up to the injectors, with a dual trace labscope, to view voltage and amperage. See the two-labscope pictures that we captured for our examples ([labeled by publication]). Our scope was set for voltage on Channel A 10 V per division and amperage on Channel B 20 mV per division. From experience we knew to capture what was likely to be good and compare it to what may be the problem. The blue box (left side) represents the good injectors, while the black box (right side) represents the bad injectors. When you compare this information, you can see the blue box has a different current reading than the black box. When we removed the injectors we found that the plates on the injectors appeared burned and rusty. We installed 2 new injectors, cleared the DTCs, and drove the generic drive cycle. The vehicle was fixed and out the door!

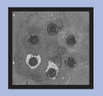
Jeep Liberty



Good Injectors



Bad Injectors



We found that the plates on the injectors appeared burned and rusty.

"G" Jerry Truglia is an experienced automotive instructor with Automotive Technician Training Services, Inc. He and Ralph Birnbaum provide training programs and materials on OBD II and many other topics, for automotive technicians, twelve state programs and various associations. You can reach G at gt@ATTStraining.com or (845) 628-1062.

The Key to a Maddening Repair Often Hangs on a Simple Thread

By Paul Davis, Program Manager for the Massachusetts Department of Environmental Protection Enhanced Emissions & Safety Test. This article originally appeared in the December 2005 issue of "Inspection Update," A publication of Massachusetts Department of Environmental Protection. It is reprinted by permission.

A used car dealer phoned the Massachusetts Department of Environmental Protection (MassDEP) with a problem: he was unable to get a Ford Windstar "ready" for its on-board diagnostic (OBD) inspection. While recounting his tribulations, the used car dealer happened to mention that he had driven the vehicle for a while then pulled it up to a workstation for a diagnostic scan, at which point he found that all but two of the monitors were ready. Because the Windstar was older and allowed to have two monitors not ready, he thought the vehicle would pass. But, since we were having this discussion, I waited for the other shoe to drop. After completing the diagnostic scan, the dealer turned off the vehicle so he could talk with the inspector. When they rescanned the vehicle to document their progress, all of its monitors had returned to "not ready." The inspector was baffled and the dealer was stumped, to say the least.

continued on p. 5

Help is a Phone Call (or Click) Away

The following resources are presented for informational purposes only and are not necessarily official productions of the Missouri Department of Natural Resources or the Gateway Clean Air Program. No one affiliated with the Department of Natural Resources or the Gateway Clean Air Program is responsible for the content or accuracy of any unofficial site listed below:

EMISSIONS TESTING INFORMATION

- www.gatewaycleanair.com
- Gateway Clean Air Program repair industry hotline: 1-888-748-0377
- Gateway Clean Air Program general information hotline: 1-888-748-1247
- www.dnr.mo.gov/env/apcp/gcap/imhome.htm
- Missouri Department of Natural Resources: (314) 416-2115 - call for information about Missouri Recognized/Qualified Repair Technicians (MRRT/MQRT) status and technical assistance.

EMISSIONS REPAIR INFORMATION

Assistance Finding Emissions Parts:

- www.tomco-inc.com or (314) 815-6944
- HELP Smog Parts: 1-800-544-4357
- Brown Recycling: 1-800-367-9271 – for information on certified used catalytic converters.

EMISSIONS-RELATED HEALTH AND SAFETY INFORMATION

- www.lungusa.org
- www.envirosafeshop.com

INDUSTRY SUPPORT

- www.nastf.org
- www.iatn.net
- www.ase.com or www.asecert.org
- www.acc-online.org
- http://automobile.sae.org
- www.carcarecouncil.org
- www.motorist.org
- www.etools.org
- www.autoserviceproviders.com or www.asa-mo.org

OBDII INFORMATION

- www.obdclearinghouse.com
- www.obdiicsu.com
- www.obdii.com
- www.autotap.com/diagnostic_guide.html
- bob@servicemycar.com (for free OBDII software)

OBDII OEM TECHNICAL WEB SITES

The following is a list of Original Equipment Manufacturer's Technical Web sites that can possibly provide useful information. The information on these Web sites can help increase your successful OBDII repair rate and should be part of your toolbox. Please note that there is a fee required to visit the majority of these sites.

- ACURA – www.ServiceExpress.Honda.com – $500 per year, $20 per 72 hours, $50 per 30 days (the 30 day option will automatically renew)
- BAVARIAN MOTOR WORKS (BMW) – www.bmwtechinfo.com – $2,500 per year, $300 per month, $25 per day
- CHRYSLER GROUP – http://www.techauthority.com – $1,500 per year, $200 per 30 days, $20 per day
- FORD – http://motorcraftservice.com – $2,499.95 per year, $19.95 per 72 hour –OBDII Theory and Operation – FREE OF CHARGE
- GENERAL MOTORS – www.acdelcotechconnect.com – $1,200 per year, $20 per day
- HYUNDAI – www.hmaservice.com – FREE
- INFINITI – www.nissantechinfo.com – $2,499.98 per year, $299.98 per 30 day, $19.99 per day
- ISUZU – www.isuzutechinfo.com – $1,650 per year, $150 per 30 day, $20 per day
- KIA – www.kiatechinfo.com – $299 per year, $29 per month, $19 per week, $10 for three days
- LEXUS – http://techinfo.toyota.com – $350 per year, $50 per month, $10 per day
- MAZDA – www.mazdatechinfo.com – $1,500 per year, $900 per six months, $199.95 per 30 day, $19.95 per day
- MINI – www.minitechinfo.com – $2,500 per year, $300 per 30 days, $25 per day
- NISSAN – www.nissantechinfo.com – $2,499.98 per year, $299.98 per 30 days, $19.99 per day
- PORSCHE – http://techinfo.porsche.com – $5,200 per year, $110 per day , document search is free
- SAAB – www.saabtechinfo.com – $500 per year, $180 per three months, $175 per month, $10 per day
- SUBARU – http://saabtechinfo.com – $2,499.95 per year, $19.95 per day
- TOYOTA – http://techinfo.toyota.com – $350 per year, $50 per month, $10 per day
- VOLVO – www.volvotechinfo.com – $3,225 per year, $322.50 per 31 days, $49.50 per 72 hours

TRAINING AND RESOURCES

www.theautochannel.com
www.aspireinc.com or 1-800-247-1099
www.caat.org
www.ccar-greenlink.org
www.automotivetestsolutions.com
www.secondchancegarage.com
www.autoed.com
www.beyondparts.com
www.fuelline.com
www.fedworld.gov/pub/auto/auto.htm
www.aera.org
www.apra.org
www.autoshop101.com
www.toolsforeducation.com
www.bergwall.com
www.diagnostichotline.com
www.learntofixcars.com
www.asetestprep.com
www.asecert.org
www.allexperts.com
www.asld.com
www.smogfree.com
www.car-sound.com
www.mad-mechanic.com
www.carleysoftware.com
www.aecc.be

Special Delivery

If you would like to receive the Gateway Air Repair at your home address instead of your workplace, please complete the information sheet on the back of this issue. Check the new address box and mail to: **Gateway Air Repair, Attn: Gateway Air Repair editor, PO Box 1034, St. Charles, MO 63302**. If you would like to receive future Gateway Air Repairs electronically by e-mail, please send an e-mail to the Gateway Air Repair editor at GCAP@esph.com.

Simple Thread *(cont. from p. 3)*

I offered that it sounded like there was a problem maintaining electricity to the powertrain control module (PCM): the vehicle was behaving as if the battery were being disconnected every time it was turned off. I could hear the proverbial gears turning on the other end of the phone, and he returned to the Windstar readiness challenge with renewed vigor.

About a week later, I received a call from the dealer with good news: He had found and corrected the problem. He indicated that the PCM gets power from two sources: one was when the ignition is on, the other when it is off. After our discussion, he tested for power at the PCM and found none. After a lot of looking, he found a break in the wire that was supposed to maintain power when the vehicle is off. As soon as that was repaired, the vehicle was soon ready and passed its inspection. Moral of the story: Difficult problems sometimes have the simplest solutions.

Articles Wanted

The Gateway Clean Air Program wants to continue to bring readers pertinent repair information. If you have an idea for an article, or have a topic you would like discussed in a future issue, please contact the Gateway Air Repair editor by fax at (314) 739-2901 or e-mail to GCAP@esph.com.

Gateway Air Repair is published by ESP Missouri Inc. email: GCAP@esph.com, phone: 314-739-8500, fax: 314-739-2901. Send all address changes, mailing requests and letters to the Gateway Air Repair editor at:

Gateway Air Repair
PO Box 1034
St. Charles, MO 63302-1034

Technician Reminder!

You will not receive notification from the Missouri Department of Natural Resources that your ASE certification is expiring. So, please keep them current.

If your A6, A8, or L1 certificate expires in July 2006 you will lose your MRRT/MQRT status. If you are the only technician at a repair facility, that facility will become inactive and removed from the Repair Facility Performance Report (RFPR). Go to www.ase.com to learn when the next testing/recertification dates are.

Please mail copies of your renewed ASE certification(s) to:
Missouri Department of Natural Resources
Inspection/Maintenance Section
7545 S. Lindbergh, Suite 210,
St. Louis, MO 63125
Or you may fax them to (314) 416-2970 or (314) 416-2971, Attention: Inspection/Maintenance Section.
Call (314) 416-2115 if you have questions regarding these or other requirements.

Training and Special Events

The following is a list of known training available in the St. Louis area. This information is for reference only and is neither endorsed nor sponsored by the Gateway Clean Air Program. To find out what training is currently being offered, please contact any of the training providers listed below. Training providers that accept the $50 MRRT Training Voucher are noted. Please contact trainers to confirm dates, course costs and to arrange payment.

CARQUEST

The trainer is Lou Nelson. For more information, contact Chris Chesney at (919) 573-3342 or Mike Mulcahy at (314) 566-4303. Courses are held at 800 N. 17th St., St. Louis, MO 63106. The MRRT Training Voucher is accepted. Verify course desired is MRRT Approved.

DESIGN TECHNOLOGY, INC. (DTI)

The trainer is Lou Craven. For information on training offered by DTI, call (636) 939-5670 or fax (636) 477-9093. The MRRT Training Voucher is accepted. Verify course desired is MRRT Approved.

MUST Level 1-Daytime Series

• Automotive Electronics Part 1	July 24
• Intro to Digital Storage Scopes	July 27
• Applied Electronics/Semi-Conductors	August 21
• DI Ignition Systems	August 24
• EI Ignition Systems	September 21
• Compression/Thermodynamics	September 25
• DI Ignition Systems	October 26
• Fuel Systems	October 30
• EI Ignition Systems	November 16
• Compression/Thermodynamics	November 27
• Automotive Computer Technology	December 18
• 02 Waveform Analysis	December 21
• Fuel Systems-Hydraulic/Electronic	January 25
• Automotive Computer Technology	January 29
• Waveform Analysis	February 26
	March 26

- Tuition per tech $188 per month / Total Cost $ 1,692
- This is a nine-month series of classes!

The following three classes will be held from 6 p.m. to 10 p.m.

• Advanced No Code Drivability	July 25
• Most Common OBD II DTC (Domestic)	August 22
• Advanced Ignition Systems	September 12

- Cost = $79 per technician
- Training Vouchers Accepted

Ford 7.3L Diesel Powerstroke System Operation

Cost = $ 199 per class

This course is designed to give technicians the fundamentals on every aspect of the Ford/Navistar 7.3 Diesel Engine Control System. Students will be provided both classroom instruction and On Truck Hands-On testing capabilities. A systematic approach to Diagnostic Testing routines using will be proven out using common DSO's and Scan Tools. Starting and Running operations will be covered in depth along with component testing. Most common failures and fixes will be discussed and normal Scan Tool Values will be given as part of this course.

- July 18th (Tues.) + August 8th (Tues.), 8 a.m. – 3 p.m.
- July 19-20 / July 26-27 / August 16-17 (Wednesday & Thursday), 4 p.m.-7:30 p.m.

DTI Automotive Service Sales Training

OBD II and Engine Diagnostics Point of Sale Course

This course is designed to help automotive service sales persons in communicating the complex operation within the OBD II system. Communicating to the consumer in a way that is on their level, using pictures and charts, helps to explain how this new complex system needs to be diagnosed properly by a trained service technician. This course also helps students learn the operation of the MIL (Malfunction Information Lamp) and OBD II Computer Operation in relation to the underhood emission control system. *This is a non technical course!*

Students will receive reference manuals and reference wall charts that help explain the complexity of the OBD II system, when in front of a customer. Who Should Attend? Anyone involved with selling OBD II or Emission Repairs to the consumer.

Dates: August 2nd & 30th (8 a.m. – 12:30 p.m.)
Cost = $225 per tech

MRRT Approved Continuing Training 2006

(6 p.m. – 10 p.m.) Cost = $79 per tech

• Advanced No Code Driveability	July 25th
• Most Common OBD II DTC (Domestic Vehicles)	August 22
• Advanced Ignition Systems	September 12

"ALL CLASSES ON TUESDAY"

FEDERAL MOGUL

Training Course Information: 1-888-771-6005
Web site: www.federal-mogul.com/training
Contact: Thomas Martin at (314) 977-0798; or send a fax to (314) 512-8398
Diagnostic Line: 1-900-486-0400 or 1-866-265-4170 ($3.95/min.)

- The MRRT Training Voucher is accepted.
- Courses TEC301, TEC304, TEC306 & TEC307 are MRRT Approved
- Technical Information / Bulletins: 1-888-819-5681 (no charge)

TEC301 Automotive Electronics

Workshop Length: 2 ½ days (20 hours), 2 CEU's Awarded -$479 (w/ hotel), $330 (w/o hotel) *See next page for dates.*

This workshop will familiarize the technician with electricity and electronics, from the fundamentals to complex automotive circuits.

Dates (contact trainer for times):
- Session 604 – July 17-19
- Session 606 – August 28-30
- Session 607 – November 6-8

TEC304 Domestic Drivability

Workshop Length: 2 ½ days (20 hours), 2 CEU's Awarded, $549 (w/ hotel), $400 (w/o hotel)

Designed specifically to keep technicians current on changing vehicle management systems for domestic vehicles. Engine controls and components are reviewed as they relate to OBD I and II. Dates (contact trainer for times):

- Session 604 – July 19-21
- Session 605 – August 7-9
- Session 606 – September 20-22
- Session 608 – November 8-10
- Session 610 – December 18-20

TEC306 Fuel and Ignition Systems Diagnostics

Workshop Length: 2 ½ days (20 hours), 2 CEU's Awarded, $549 (w/ hotel), $400 (w/o hotel)

Designed for technicians servicing drivability, emission and tune-up repair on today's vehicles. Practical instruction focuses on the fuel delivery and ignition systems that are essential knowledge for technicians.

Dates (contact trainer for times):
- Session 605 – September 18-20
- Session 607 – November 13-15

TEC307 Advanced Drivability

Workshop Length: 2 days (16 hours), 1.6 CEU's Awarded, $439 (w/ hotel), $340 (w/o hotel)

Concentrating on advanced drivability problems encountered on late model vehicles. Students will learn the function and purpose of engine management systems.

Dates (contact trainer for times):
- Session 603 – August 9-11
- Session 604 – November 15-17
- Session 607 – December 20-22

ST. LOUIS COMMUNITY COLLEGE AT FOREST PARK

The trainers are Angelo Vitullo and Bob Weil. Contact Angelo at (314) 951-9420 for additional details. To register by phone or for payment by credit card, call Andrea at (314) 539-5341 or (314) 644-9287. All courses are held at St. Louis Community College at Forest Park at 5600 Oakland Ave., St. Louis, MO. MRRT Training Vouchers are not accepted but may be submitted by a shop directly to the Department of Natural Resources per the instructions on the voucher.

Automotive Service Excellence (ASE) Test Prep L1 Crash Course

4-hour course/one night. All nights 6 p.m. to 10 p.m.
This course is not approved for MRRT continuing education.
Cost = $75.
- May 1

Automotive Oscilloscopes and Emissions Diagnostics

9-hour course/three nights. All nights 6 p.m. to 9 p.m.
This course is approved for MRRT continuing education.
Cost = $100.
- July 19, 24 and 26

Carbureted Vehicle I/M Failures and Current Topics Dealing with GCAP Program

4-hour course/one night. All nights 6 p.m. to 10 p.m. This course is approved for MRRT continuing education.
Cost = $50.
- July 13

Evaporative Emissions System Course

6-hour course/two nights: 6-hour course/two nights. All nights 6 p.m. to 9 p.m. This course is approved for MRRT continuing education.
Cost = $75.
- July 25 and 27

Internet Resources, Electronic Information Systems, Computer Reprogramming

4-hour course/one night. All nights 6 p.m. to 10 p.m.
This course is approved for MRRT continuing education.
Investigate three areas of interest: Electronic Information Systems, usage of popular PC software and the Internet to facilitate organization and communication of technical information and Reprogramming of Vehicle Computers.
Cost = $50.
- July 18

MRRT/GCAP Course

4-hour course/one night. All nights 6 p.m. to 10 p.m. This course is not approved for MRRT continuing education.
Cost = $50.
- July 12

AREA TRAINERS!

Are you currently offering automotive repair training in the St. Louis area? If so, please contact us to be included in future issues of the Gateway Air Repair. Please include a detailed description of your course, including topics covered, dates, costs and location. Send notices to the Gateway Air Repair Editor by e-mail to GCAP@esph.com, by fax to (314)739-2901 or by mail to Gateway Air Repair Editor, P.O. Box 1034, St. Charles, MO 63302-1034. If the training is emissions-related and you would like it evaluated as a continuing education course offered to all MRRTs, please contact the Missouri Department of Natural Resources at (314) 416-2115.

Gateway Air Repair
PO Box 1034
St. Charles, MO 63302-1034

PLEASE POST. Please pass on to any Missouri Recognized/Qualified Repair Technicians working at this address.

THIS NEWSLETTER PRINTED ON RECYCLED PAPER

Count Me In!

I'd like more information about the Gateway Clean Air Program!

Please Print

Name _____ Technician ID Number _____

Company Name _____ Facility ID Number _____

Address _____

City, State, Zip _____

Phone _____ E-mail Address _____

___ I'd like to receive the Gateway Air Repair electronically.

___ I'd like to receive future issues at home.

❑ Please change or correct my address.

I am interested in:

_____ Send me OBDII brochures

_____ Training opportunities

_____ More information on becoming a Missouri Recognized Repair Technician or a Missouri Qualified Repair Technician

MAIL TO:
Gateway Air Repair
PO Box 1034
St. Charles, MO 63302-1034